

IN THE CLAIMS:

1. (Currently Amended) A process for determining the position and[[/or]] the shape of at least one registration mark on a web to be printed on, the process comprising:

obtaining the image to be printed including obtaining prepress data of the image to be printed from digital or analog image data of a preliminary printing stage or a print original;

5 establishing predetermined criteria for arranging the registration mark;

adapting the criteria to the conditions of the image to be printed based on the prepress data;

determining the position and[[/or]] the shape of at least one registration mark in the image to be printed using the prepress data in which the position of the mark in the actual print  
10 image is arranged randomly in regions of the print image established based on the criteria adapted to the conditions of the image to be printed.

2. (Original) A process in accordance with claim 1, wherein the position and/or the shape of a plurality of marks and/or at least one mark field and/or at least one mark field white edge is determined with the use of the prepress data.

3. (Currently Amended) A process in accordance with claim 1, further comprising:  
providing at least one sensor; and  
forming registration mark position data based on the determined position and shape of  
the registration mark, wherein the position data of the at least one mark or of the mark field are

5 used to position the at least one sensor.

4. (Currently Amended) A process in accordance with claim 1, further comprising:  
providing at least one sensor;

forming registration mark position data based on the determined position and shape of  
the registration mark; and

5 determining a point in time for registration mark detection using the sensor, wherein the  
position data of the at least one registration mark and/or of a mark field is used to determine  
the point in time of the detection of the mark by the at least one sensor.

5. (Currently Amended) A process in accordance with claim 1, wherein the detected  
position of at least one mark and/or of a mark field is used to determine [[the]] a reference  
position.

6. (Currently Amended) A process in accordance with claim 1, further comprising:  
providing one or more sensors;

forming registration mark position data based on the determined position and shape of  
the at least one registration mark and/or a mark field of registration marks;

5 positioning the sensor and/or determining a point in time for registration mark detection  
using the sensor based on the position data of the registration; and

wherein using the one or more sensors to form data to determine position errors of the

at least one registration mark and/or of a mark field and/or of the white edge ~~are determined~~.

7. (Currently Amended) A process in accordance with claim 6, ~~wherein~~ further comprising determining the degree of soiling of the sensors and/or the intensity of illumination ~~are determined~~ from a comparison of the prepress data with the data detected by sensors.

8. (Currently Amended) A process in accordance with claim 1, ~~wherein~~ further comprising:

establishing an unambiguous assignment ~~is established~~ between the registration marks and final control elements controlling ink for the print production using production data from a production planning computer, ~~and determining the coordinates of the registration mark based on the production data.~~

9. (Original) A process in accordance with claim 8, wherein the production data includes one or more of web guiding data, plate coverage data and/or ink coverage data.

10. (Currently Amended) A device for determining the position and/or the shape of at least one mark on a web to be printed on, the device comprising:

an input device for entering prepress data of the image to be printed from digital or analog image data of a preliminary printing stage or a print original; and

a device for determining position data and ~~and~~ shapes for a registration mark based

on the prepress data entered, the device having predetermined criteria for arranging the registration mark adapted to the conditions of the image to be printed based on the prepress data and wherein the position of the mark in the actual print image is arranged randomly in regions of the print image established based on the criteria adapted to the conditions of the image to be printed.

11. (Currently Amended) A device according to claim 10, wherein the device further is for checking the print quality with at least one sensor, the device further comprising:

~~an input device for entering prepress data;~~

~~— a device for determining position data and/or shapes for a mark based on the prepress data entered; and~~

a sensor positioned and/or actuated on the basis of position data determined.

12. (New) A device in accordance with claim 11, wherein the position and the shape of a plurality of marks and at least one mark field and at least one mark field white edge is determined with the use of the prepress data.

13. (New) A device in accordance with claim 12, further comprising:

a final control element, wherein said final control element uses said position data to position said sensor or time the activation of said sensor.

14. (New) A device in accordance with claim 13, wherein the device for determining position data and shapes for a registration mark uses the detected position of at least one registration mark and/or of a mark field to determine a reference position.

15. (New) A device in accordance with claim 14, wherein the device for determining position data and shapes for a registration mark determines position data a mark field and/or a white edge of the registration mark or mark field.

16. (New) A device in accordance with claim 13, wherein one of the device for determining position data and shapes for a registration mark and the final control element determines the degree of soiling of the sensors and/or the intensity of illumination from a comparison of the prepress data with the data detected by the sensor.

17. (New) A device in accordance with claim 11, wherein one of the device for determining position data and shapes for a registration mark and the final control element establishes an unambiguous assignment between the registration marks and the control of the ink for the print production using production data from a production planning computer.

18. (New) A device in accordance with claim 17, wherein the production data includes one or more of web guiding data, plate coverage data and/or ink coverage data.

19. (New) A device for control of printing on a web, the device comprising:

an input device for entering the prepress data of the image to be printed from digital or analog image data of a preliminary printing stage or a print original; and

a registration mark position and shape determination means for determining position and shape data for a registration mark based on the prepress data entered, the device having predetermined criteria for arranging the registration mark adapted to the conditions of the image to be printed based on the prepress data and wherein the position of the mark in the actual print image is arranged randomly in regions of the print image, said regions being established based on the criteria adapted to the conditions of the image to be printed;

a web printing station with a plurality of inking rollers and ink feed mechanisms;

a production planning computer providing one or more of web guiding data, plate coverage data and/or ink coverage data;

a final control element connected to said mark position and shape determination means, connected to said web printing station and connected to said production planning computer for controlling said web printing station based on said production planning computer and based on said position and shape data for a registration mark;

a sensor; said sensor being positioned and/or actuated by said final control element on the basis of position and shape data.

20. (New) A device in accordance with claim 19, wherein one of the device for determining position data and shapes for a registration mark and the final control element

determines the degree of soiling of the sensors and/or the intensity of illumination from a comparison of the prepress data with the data detected by the sensor.

21. (New) A device in accordance with claim 19, wherein one of the device for determining position data and shapes for a registration mark and the final control element establishes an unambiguous assignment between the registration mark sensed by said sensor and the control of the ink for the print production using production data from a production planning computer.

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